

ABSTRACT

A folded optical waveguide structure comprises a substrate supporting a waveguide slab. An array of laterally spaced grating waveguides extends from the slab along the substrate to propagate optical signals to and from a reflective surface of a mirror member at an end face of the substrate. A layer of index matching material is located between the ends of the waveguides and the reflective surface. A thermally conductive, e.g. copper, body is interposed between the mirror member and the substrate such that dimensional changes of the thermally conductive body resulting from changes in ambient temperature of the grating array waveguides, tilt the mirror member against the substrate, away from or toward the end face of the substrate. The thermally conductive body is so dimensioned that temperature induced changes in optical path lengths of optical signals propagated along the grating array waveguides are substantially compensated by changes in optical path lengths between the ends of the grating waveguides and the reflecting surface caused by the tilting of the mirror member with respect to the grating waveguides at said end of the substrate.